

In the Specification:

- (1) Please add new Figures 4 – 7, which are attached.
- (2) Please amend the Specification at Page 6 to include the following four new paragraphs after Paragraph 22:

Figure 4 depicts a sample initial dialog box in accordance with an exemplary embodiment of the present invention.

Figure 5 depicts a sample control dialog box for selecting a CAD system interface and degree of user interaction in accordance with an exemplary embodiment of the present invention.

Figure 6 depicts sample dialog boxes and selection screens showing fully manual feature selection sequencing in a flow chart in accordance with an exemplary embodiment of the present invention.

Figure 7 depicts sample dialog boxes and selection screens showing partial interaction feature selection sequencing in a flow chart in accordance with an exemplary embodiment of the present invention.

- (3) Please amend the Specification at Pages 51-52 to replace all three full paragraphs with the following three paragraphs:

FEATURE SELECTION

The FDG1 iPlus software is implemented as a series of property sheets. The initial dialog box for iPlus is unchanged from G1. The user must still select the desired file, the number of views, and the view type. This dialog box is shown in Figure 4 ~~1 of this Appendix~~. However, iPlus will diverge from G1 after the initial dialog box. An

intermediary dialog box will request the user to select the CAD system to use for the visualization and selection process and the desired amount of user interaction. Figure ~~5 2 in~~ 5 2 ~~this appendix~~ shows a sample dialog box for this. Initial development will concentrate on SolidWorks 2001 Plus and AutoCAD 2002 as the CAD tools. Once a CAD system has been selected, the appropriate DLL opens the chosen CAD system or displays an error message if necessary.

If the user has selected the fully manual approach, a manual loop selection dialog will contain a button allowing the user to select the entities and a second that the user may select when the matching loop selection process is complete. Once a feature selection has been made, the software will validate the loops for a valid feature. Validation will consist of checking for complete, closed loops as well as verifying matched boundaries within the selected loops. If the selected loops do *not* pass the validation process, the user will be prompted to either correct the loops or cancel the selection. Once the matched loops are validated, these loops will be added to the array of feature loops (see FDG1), and the next dialog sequence will ask the user if more feature selection is needed, or if this step is complete. The process will be repeated until the user has indicated that no further selection is necessary at which point the remaining FDG1 steps (feature analysis and model build) will continue. This fully manual process, complete with sample dialog boxes, is depicted in Figure ~~6 3 of this appendix~~ 6 3 ~~this appendix~~.

If partially automated, the FDG1 software will perform the feature detection algorithms as usual. Once all possible features have been automatically detected, the iPlus software will display a selection screen containing radio buttons that allows the user to

accept or reject the matching loops displayed by the software. The software will display each set of matched loops until the user has accepted or rejected each feature. If at any point the user rejects a feature, the software will ask if the user desires to edit the matching loops generated by the software. If the user does not wish to edit the feature's loops, the software continues to the next set of matched loops. If the user wants to edit the loops, the software will continue in manual selection mode via the manual loop selection screen with the *Select* and *Done* buttons. As in the manual mode, the software will validate the selected matched loops and indicate any errors to the user. This semi-automated sequence complete with sample dialog boxes is depicted in Figure 7 ~~4 of this appendix~~.

- (4) Please delete all text and figures on Pages 53 – 57 of the Specification.